

FLANKER FISH

File Info:	S1500_FlankerFishv5.exp, S2000_FlankerFishv5.exp, S4000_FlankerFishv7.exp, K1500_FlankerFishv5.exp, K2000_FlankerFishv5.exp., K4000_FlankerFishv7.exp.
Brief Description:	In this game, the subject must “feed” the hungry fish by pressing where it/they are facing. When the fish are blue, the hungry fish is in the middle and when the fish are pink, the hungry fish are on the outside. There is an inside-only, outside-only, and mixed block.
Stimulus presentations:	There are TouchScreen (S) and KeyPress (K) versions of this game. S1500/K1500 (1500 msec stimulus presentation) for adults and kids 7 years and older, and S2000/K2000 (2000 msec stimulus presentation) for kids 6 and under. There is a S4000/K4000 (4000 msec stimulus presentation) for younger children if 2000 msec is too short.
Versions	Version 3 has no feedback. The S/K1500 version has no practice block3 (before mixed) Version 4 has enlarged touch screen activation area to match that of Hearts Flowers. Applicable only to S versions. Version 5 will save an output .txt file even if the program is interrupted by the ‘Esc’ key. Also, added ‘exit’ points during the practice sessions so that the tester may quit the program altogether if things are going badly. Version 7 corrected a bug in the time the stimulus was active for more than 2000ms.
Program Info:	PRESENTATION Program
Task Design:	<ul style="list-style-type: none"> • Blue Instructions (Middle Fish) • Blue (Middle Fish) Practice Trials (4) x up to 3 <ul style="list-style-type: none"> ○ 500 msec Blank → Inf. Stim. → 1000 msec feedback • Blue (Middle Fish) Trials (17) <ul style="list-style-type: none"> ○ 500 msec Blank → 1500/2000 msec Stim. → 1000 msec feedback • Pink Instructions (Outside Fish) • Pink (Outside Fish) Practice Trials (4) x up to 3 <ul style="list-style-type: none"> ○ 500 msec Blank → Inf. Stim. → 1000 msec feedback • Pink (Outside Fish) Trials (17) <ul style="list-style-type: none"> ○ 500 msec Blank → 1500/2000 msec Stim. → 1000 msec feedback • Mixed Instructions (Middle + Outside Fish) • Mixed Practice Trials (8) x up to 3 <ul style="list-style-type: none"> ○ 500 msec Blank → Inf. Stim. → 1000 msec feedback • Mixed Trials (45) <ul style="list-style-type: none"> ○ 500 msec Blank → 1500/2000 msec Stim. → 1000 msec feedback
Block Design:	<p>Blue (Middle) Fish Practice (4) x up to 3:</p> <ul style="list-style-type: none"> ○ Press in the direction the MIDDLE fish is facing ○ All trials are Blue (Middle Fish) ○ <i>Passing Criteria:</i> If subject misses 2 or more, or the experimenter selects NO for “Continue?” the program runs an additional practice (up to 3) ○ Displayed indefinitely until the subject responds [Currently Only in TouchScreen Versions, the Keyboard version waits for a correct response.] ○ Positive/Negative feedback given by experimenter and by the program (audio and visual) <p>Blue (Middle) Fish Trials (17)</p> <ul style="list-style-type: none"> ○ Discard 1st trial ○ Positive/Negative feedback given by the program only ○ 16 Included Trials (8 Right/8 Left) <ul style="list-style-type: none"> ▪ 2 Congruent trials (1R/ 1L) ▪ 10 Incongruent trials (5R/5L) ▪ 2 No Distractor trials (1R/ 1L)

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	<ul style="list-style-type: none"> ▪ 2 Neutral trials (1R/ 1L) ○ Subject may respond until the end of the stimulus' presentation <p>Pink (Outside) Fish Practice (4) x up to 3:</p> <ul style="list-style-type: none"> ○ Press in the direction the OUTSIDE fish is facing ○ All trials are Pink (Outside Fish) ○ <i>Passing Criteria:</i> If subject misses 2 or more, or the experimenter selects NO for "Continue?" the program runs an additional practice (up to 3) ○ Displayed indefinitely until the subject responds. ○ Positive/Negative feedback given by experimenter and by the program (audio and visual) <p>Pink (Outside) Fish Trials (17)</p> <ul style="list-style-type: none"> ○ Discard 1st trial ○ Positive/Negative feedback given by the program only ○ 16 Included Trials (8 Right/8 Left) <ul style="list-style-type: none"> ▪ 2 Congruent trials (1R/ 1L) ▪ 10 Incongruent trials (5R/5L) ▪ 2 No Distractor trials (1R/ 1L) ▪ 2 Neutral trials (1R/ 1L) ○ Subject may respond until the end of the stimulus' presentation <p>Mixed (Inside + Outside) Fish Practice (8) x up to 3:</p> <ul style="list-style-type: none"> ○ For Blue Fish, press where the MIDDLE fish is facing and for Pink Fish, press where the OUTSIDE fish are facing ○ <i>Passing Criteria:</i> If subject misses 3 or more, or the experimenter selects NO for "Continue?" the program runs an additional practice (up to 3) ○ Displayed indefinitely until the subject responds ○ Positive/Negative feedback given by experimenter and by the program (audio and visual) <p>Mixed Fish Trials (45)</p> <ul style="list-style-type: none"> ○ Discard 1st trial ○ Positive/Negative feedback given by the program only ○ 44 Included Trials (8 Right/8 Left) <ul style="list-style-type: none"> ▪ 12 Congruent trials (6R/ 6L) ▪ 12 Incongruent trials (6R/6L) ▪ 8 No Distractor trials (4R/ 4L) ▪ 8 Neutral trials (4R/ 4L) ○ Subject may respond until the end of the stimulus' presentation
Responses:	<ul style="list-style-type: none"> • Directions: advance with the <Enter> key by the experimenter • Done?: If this was sufficient practice select 'Y' for yes, otherwise 'N' for no • Do you want to leave the game? If you want to quit the game altogether press 'Y'. Otherwise, 'N' to continue with the game. • Practice: advanced by CORRECT response from participant • For KeyPress Responses are <Ctrl> (Left-hand) and the Number Pad's <Enter> (Right-hand) on a standard keyboard. • For TouchScreen, Responses are Left-hand and Right-hand presses to TouchScreen buttons.
Buttons:	<p>TouchScreen:</p> <ol style="list-style-type: none"> 1. Mouse Button 0 (Left-Click) 2. Enter 3. Y 4. N

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Keyboard:

1. Enter
2. Y
3. N
4. Ctrl
5. Num Enter

Data

- Data saved at the end of **each trial** (not just at the end of the game.)

- **DATA (saved as comma delimited .txt file – “FlankerFish_subjectID.txt”)**

Combining output files

To collect all the output files into one excel file, use ‘Combine-O-Files’. Place the executable file CombineData.exe into the My Documents Folder. Double click on the exe file to run the program. A window will open with a navigation box. Navigate to the folder that contains only the files you want to combine. Note that moving Presentation’s log files may be necessary – they may be listed as .txt files on some computers. Once the folder selected with the appropriate files, press “Compile” – the default Options should work. The output will be one excel file.

DATA KEY:

SubjectID	Subject’s unique ID code
Experiment	Name of Experiment (FlankerFish)
BlockNo	1 = Blue (Middle) Block, 2 = Pink (Outside) Block, 3 = Mixed Block
TrialNo	The order in which the trial was given (counting starts over for each block)
IsTrial	Is this an actual trial? 0 = no this is practice, 1 = yes this is a trial
TrialName	The name of the trial
TrialType	1 = Congruent, 2 = Incongruent, 3 = No Distractor, 4 = Neutral
InOut	1 = Inside/Blue trial, 2 = Outside/Pink trial
ExpRes	The side on which the subject should press: 1 = Left, 2 = Right
Response	The actual response given by the subject: 1 = Left, 2 = Right, 0 = None
Correct	1 = Correct, 0 = Incorrect
RT	Reaction time given in msec (0 means no response was given)

Comment regarding the ‘Esc’ key, the log file and the txt data file.

Neurobehavioral Systems have finally decided that the ‘Esc’ key can be disabled. That decision occurred on Nov 12, 2009 and the change will appear in the next release of Presentation. Until the change occurs, it is easy to exit any of our Presentation tasks via the ‘Esc’ key which causes the program to immediately shut down.

All of our Presentation tasks have been programmed to save data only if the game reaches its natural conclusion. This behavior is the recommended program design within the Presentation documentation and has always been true. The reason is to prevent potential larger timing uncertainties caused by the operating system accessing the hard disk at critical timing moments (i.e. when detecting a response from the touch screen).

Combining the behavior of the ‘Esc’ key – which can not carry a script to save an output .txt file – and the tasks’ design of only saving at the end, has meant that no output .txt file would be created if the task was stopped before completion. The Presentation log file - *.log - does not contain response information from the touch screens. Thus, they cannot be used to recreate the *.txt data. The log files provide quality control information (timing uncertainty). Note also that the response times differ slightly (a couple of ms) between the log file and txt file as they are captured at different points during the running of the task. Mixing the response times from the log and txt files would result in decreased accuracy of measurement.

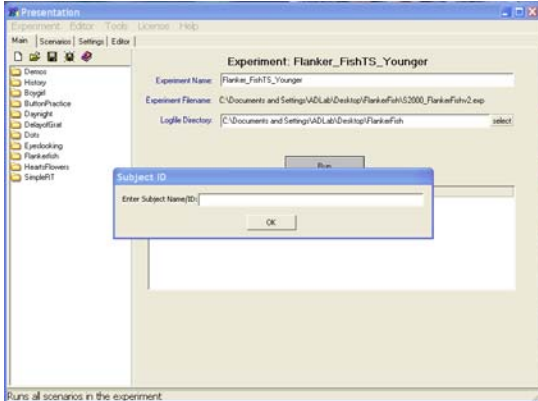
Add stats

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A) Starting Flanker FISH

Enter the participant's unique identifier in **SubjectID**.

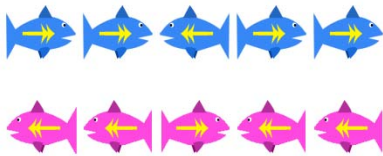


A black screen will appear with **“Ready...”**. Press the **enter** key to continue.

The next screen will be white with **“Number:”** centered. Please enter again the participant's unique identifier (the same as SubjectID).

B) Demonstrating the Blue Fish Game

The next screen has the caption **“In this game, you’re going to see lots of fish like these! Your job is to feed the hungry fish!”**

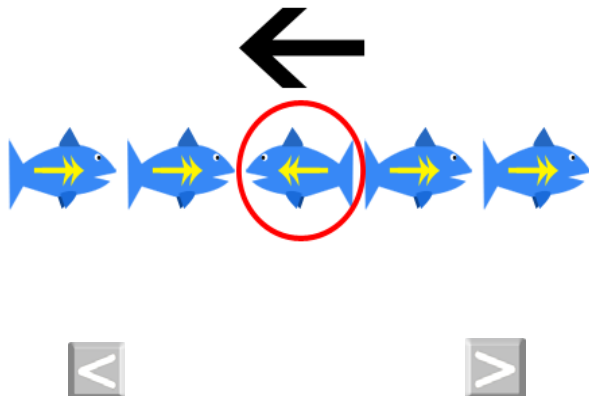


Press **enter**.

In this game the subjects are told to press the button that the middle fish is facing.

The next screen has the caption **“When the fish are BLUE the hungry fish is in the MIDDLE! Feed the MIDDLE fish by pressing where it’s facing. Here, the middle fish is facing this way!”** (The arrow is pointing left.)

Experimenter says “In this game you get to feed the hungry fish! The hungry fish is in the middle, feed the middle fish by pressing where it’s facing!” See the middle fish is facing this way so you press this button.”



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To advance to the next screen, the tester **presses the screen** to the left of the left button 

The next screen has three parts. The top caption says “**Sometimes the MIDDLE fish will be all by himself! You should still press where he’s facing!**”



The middle caption says “**Sometimes the MIDDLE fish will have company that’s going in another direction! You should still press where the middle fish is facing!**”



The bottom caption says, “**Your job is to feed the MIDDLE fish!**”





Press **enter**.

The next screen has “**Let’s Practice!**” in the upper centre. If the participant is ready, then press **enter**.

C) Practicing the Blue Fish Game

The participant now can practice the task as set out above. There is no time limit. The task will advance to the next screen

when the participant pushes the screen to the left or right of the left  button or the right  button.

i) Incorrect Response Path

If the participant gives two incorrect responses, a screen with “**Remember...**” appears.

Press **enter** to advance.

A screen with the caption, “**When the fish are BLUE, the hungry fish is in the MIDDLE! Feed the MIDDLE fish by pressing where it’s facing. Here, the middle fish is facing this way!**” (Note the arrow is point left).



To advance to the next screen, the tester **presses the screen** to the left of the left button 

The participant then continues practicing. *Passing Criteria:* If subject misses 2 or more, or the experimenter selects NO for “Done?” the program runs an additional practice (up to 3).

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ii) Correct Response Path

If the participant passes the practice session, then a screen with the words “**Done?**” appears. The answer is either **Y** for yes and **N** for no.

Then a screen with the words “**Nice Job!! Now it’s time to play the game for real!**” or “**Great!! Now it’s time to play the game for real!**” or “**Nice! Now it’s time to play the game for real!**”

Press **enter** to advance.

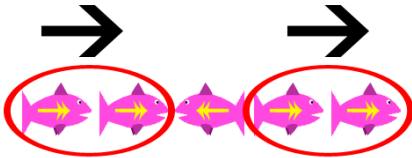
The blue fish game begins with each trial limited in time.

D) The Pink Fish Game.

After the participant completes the Blue fish game, then a screen with the words “**Great job!! Now a new rule!**”

Press **enter** to advance.

Then a screen with the caption “**When the fish are PINK all the OUTSIDE fish are hungry! Feed the fish on the OUTSIDE by pressing where they’re facing. Here, the outside fish are facing this way.**” (Note the arrows pointing right.)



To advance to the next screen, the tester **presses the screen** to the right of the right button



The next screen has the top caption “**Sometimes there won’t be a middle fish! You should still press where the OUTSIDE fish are facing!**”



The middle caption says “**And sometimes the other fish will be going somewhere else! You should still press where the OUTSIDE fish are facing!**”



The bottom caption says “**Your job is to feed the OUTSIDE fish!**”

Press **enter** to continue

The next screen says “**Let’s Practice!**” in the upper centre.

The practice session and the game session follows the same pattern as for the first Blue fish block.

If the participant passes the practice session, then a screen with the words “**Done?**” appears. The answer is either **Y** for yes and **N** for no.

Then a screen with the words “**Nice Job!! Now it’s time to play the game for real!**” or “**Great!! Now it’s time to play the game for real!**” or “**Nice! Now it’s time to play the game for real!**”

Press **enter** to advance.

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The pink fish game ends with a screen saying “**That was wonderful!**”

Press **enter** to advance.

E) The Mixed (Blue and Pink Fish) Game.

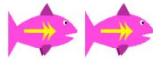
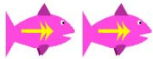
The next screen says “**Now you’re going to play the game with BOTH colors. So try really hard to remember the rules!**”

Press **enter** to advance.

A colorful screen appears with the top caption “**Blue means feed the MIDDLE! Press where the MIDDLE fish is facing!**”



The middle caption says “**Pink means feed the OUTSIDE! Press where the OUTSIDE fish are facing!**”



The bottom caption says “**Blue – MIDDLE! Pink – OUTSIDE!**”



Press **enter** to advance.

The next screen says “**Let’s Practice!**” in the upper centre.

The practice session and the game session follows the same pattern as for the Blue fish and Pink fish blocks.

If the participant passes the practice session, then a screen with the words “**Done?**” appears. The answer is either **Y** for yes and **N** for no.

Then a screen with the words “**Nice Job!! Now it’s time to play the game for real!**” or “**Great!! Now it’s time to play the game for real!**” or “**Nice! Now it’s time to play the game for real!**”

Press **enter** to advance.

The mixed Blue fish and Pink fish game begins.

The game **ends** with a cheer!